

L 44589-66 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AP6015679 (A) SOURCE CODE: UR/0413/66/000/009/0078/0078

32  
B

INVENTOR: Korolev, G. V.; Smirnov, B. R.; Yarkina, V. V.; Berlin, A. A.

ORG: none

TITLE: Preparation of formulations which can be polymerized when exposed to light.  
Class 33, No. 181300 ✓

SOURCE: Izobreteniya, promyshlennyye obraztsey, tovarnyye znaki, no. 9, 1966, 78

TOPIC TAGS: photopolymerization, polymerization

ABSTRACT: This Author Certificate introduces a method of preparing formulations suitable for photopolymerization. The formulations contain a polymer base, a compound that can be polymerized and a polymerization initiator. To stabilize the material and to plasticize it temporarily during processing, the compound containing in its chain groups  $\begin{array}{c} | \\ -C-S-C- \\ | \end{array}$  is suggested as suitable for polymerization. [LD]  
[Translation]

SUB CODE: 11/ SUBM DATE: 25Feb65/

Card 1/1 POM

UDC: 771.531.678.745.6:66.095.265

L 09253-67 EMT(m)/EWP(j) IJP(c) RM/WM  
 ACC NR: AP6029910 (A) SOURCE CODE: UR/0413/66/000/015/0086/0087 577

INVENTORS: Bass, S. I.; Borlin, A. A.; Yarkina, V. V.; Sbinar, L. A.

ORG: none

TITLE: A method for imparting heat resistance to hardened phenolaldehyde resins.  
 Class 39, No. 184431

SOURCE: Izobrot prom obraz tov zn, no. 15, 1966, 86-87

TOPIC TAGS: thermal stability, thermal process, resin, heat resistant plastic

ABSTRACT: This Author Certificate presents a method for imparting heat resistance to hardened phenolaldehyde resins. This is accomplished by adding to them (prior to their hardening) stabilizing compounds capable of interlinking and containing  $10^{16}$ -- $10^{19}$  paramagnetic particles per gram. To produce high-temperature stabilization (at temperatures on the order of 400C), polyphenyl acetylene or hardened phenolaldehyde resins (heat treated at 300--500C in an atmosphere of an inert gas or in a vacuum) are used as stabilizers.

SUB CODE: 11/ SUBM DATE: 13Feb65

UDC: 678.018.0.678 422

Card 1/1

AFRIKYAN, A.N.; YARKINA, Ye.P.

Isolation of oil-reservoir rocks in carbonate sediments based  
on the materials of geophysical study of wells. Trudy VNIING  
no.1:179-190 '62. (MIRA 16:10)

AFRIKYAN, A.N.; YARKINA, Ye.P.

Isolation of karst zones by industrial and field geophysical  
methods in sections of Volgograd Province. Geol.nefti i gaza  
6 no.4:55-58 Ap '62. (MIRA 15:4)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti  
im. akademika Gubkina i Volgogradskiy nauchno-issledovatel'skiy  
institut neftyanoy i gazovoy promyshlennosti.  
(Volgograd Province---Karst)

YARKOV, A.

Automobile plant workers aid collective farms and machine-tractor  
stations. Sel'.stroi. 10 no.2:12 F '55. (MIRA 8:4)

1. Glavnyy mekhanik avtozavoda im. Stalina, predsedatel' shefskoy  
komissii.  
(Collective farms)

TARASOV, Vladimir Mikhaylovich; YARKOV, A.M., inzh., retsenzent;  
KOSOROTOV, B.V., inzh., red.; GARANKINA, S.P., red. izd-va;  
EL'KIND, V.D., tekhn. red.

[Air-piston compressors; manual] Vozdushnye porshnevye kom-  
pressory; spravochnoe posobie. Moskva, Mashgiz, 1962. 157 p.  
(MIRA 15:7)

(Air compressors) (Automatic control)

YAKOVLEV, Vasilii Nikolayevich; YARKOV, A.M., inzh., red.; IVANOVA,  
K.N., inzh., red. izd-va; SMIRNOVA, G.V., tekhn. red.

[Repairing equipment of machinery plants] Remont oborudovaniia  
mashinostroitel'nykh zavodov; spravochnoe posobie. Moskva,  
Mashgiz, 1962. 292 p. (MIRA 15:9)  
(Industrial equipment--Maintenance and repair)

RASKATOV, V.M., inzh.; KOKHTEV, A.A.; LELIANOV, V.A.; BESSONOVA,  
N.F.; VEYS, D.A.; KARABANOVA, L.T.; SILANT'YEV, M.G.;  
SITNICHENKO, A.I. [deceased]; CHYENKOV, V.S.; YARKOV, A.M.,  
inzh., retsenzent; GARANKINA, S.P., red.izd-va; TIKHANOV,  
A.Ya., tekhn. red.

[Brief handbook on materials used in the machinery industry]  
Kratkii spravochnik po mashinostroitel'nym materialam. Pod  
obshchey red, V.M.Raskatova. Moskva, Moskgiz, 1963. 440 p.  
(MIRA 16:7)

(Materials)



REYNGOL'D, Ye.G.; YARKOV, A.M., inzh., retsenzent

[Coordinate points on a circle; reference tables] Koordiny tochek okruzhnosti; spravochnye tablitsy. Moskva, Mashinostroenie, 1964. 115 p. (MIKA 17:8)

CHERNAVSKIY, G.N., kand. tekhn. nauk, dots. [deceased]; YARKOV, A.M.,  
inzh., retsenzent; KUNIN, P.A., inzh., red.

[Fundamentals of an efficient use of automatic and semi-  
automatic lathes; machining ring and bushing type parts]  
Osnovy ratsional'nogo ispol'zovaniia tokarnykh avtomatov  
i poluavtomatov; obrabotka detalei tipa kolets i vtulok.  
Moskva, Izd-vo "Mashinostroenie," 1964. 214 p.

(MIRA 17:7)

VOLCHKEVICH, L.I.; USOV, B.A.; LEBEDEV, A.S., inzh., retsenzent;  
YARKOV, A.M., inzh., retsenzent; MALOV, A.N., prof.,  
red.

[Automatic feed mechanisms] Avtooperatory. Moskva, Ma-  
shinostroenie, 1965. 142 p. (MIRA 18:12)

GOL'DIN, M.M.; ZUYEV, V.D.; PINUS, L.A.; PONOMAREV, V.F.;  
CHERNYSHEV, V.Ye.; LIKHIN, N.I., inzh., retsenzent;  
YARKOV, A.M., inzh., red.

[Adjustment and operation of automatic lines composed of  
standard units; a handbook] Naladka i ekspluatatsia av-  
tomaticheskikh linii iz normalizovannykh uzlov; spravochnoe  
posobie. Moskva, Mashinostroenie, 1965. 443 p.

(MIRA 18:10)

YARKOV, A.V.

Manipulator for welding small parts. Svar. proizv. no.4:37  
Ap '65. (MIRA 18:6)

YARKOV, A.V.

Attachment to the ADK-500 automatic welding machine for the  
welding of small diameter parts. Svar. proizv. no.10:38 0  
'63.

(MIRA 16:11)

1. Kurganskiy mashinostroitel'nyy zavod.

YARKOV, A.V.

A waste-gas-heated drying apparatus for welding electrodes.  
Svar, proizv. no.9:40 S '65. (MIRA 18:9)

1. Kurganskiy zavod khimicheskogo mashinostroyeniya.

YARKOV, Dmitriy Mikhaylovich

[Credit for collective farms] Proizvodstvennoe kreditovanie kolkhovoy.  
Moskva, Gos. izd-vo selkhoz lit-ry, 1956. 79 p. (MLRA 9:12)  
(Collective farming--Finance)



YARKOV, DMITRIY MIKHAYLOVICH

N/5  
773.3.  
.Y91

Finansirovaniye I Kreditovaniye Sel' Skokhozyaystvennykh Predpriyatiy  
(Financing and Crediting of Agricultural Enterprises) Moskva, Sel'Khoz-  
giz, 1957.  
294 P. Tables.

MB

ALEKSANDROV, Yu.; PILIPUSHKO, I.; VOLCHENKO, V.; SENDEROV, I.; LIMARENKO, L.;  
YARKOV, G.; YEMTSEV, I.; KUKHAREV, N.; SHCHEKOTOVICH, P.; BOBOVICH, V.;  
CHEREPANOV, G.

They are raising the level of their qualifications. Zashch.rast.  
ot vred.i bol. 7 no.5:61 My '62. (MIRA 15:11)  
(Plants, Protection of—Study and teaching)

7/16/2001  
DAVIDENKOV, N.N.; YARKOV, V.A.

Brittle failure due to biaxial compression. Zhur.tekh.fiz. 25  
no.12:2200-2202 O '55. (MLRA 9:1)

(Gypsum) (Strains and stresses)

S/187/60/000/001/003/003  
A189/A026

6,6000

AUTHOR: Yarkov, V.A.

TITLE: PTU-5 Underwater Television Unit

PERIODICAL: Tekhnika kino i televideniya, 1960, No. 1, pp. 44 - 48

TEXT: The author describes the ПТУ-5 (PTU-5) underwater closed-circuit television unit, which was displayed at the 1958 World Exhibition in Brussels. It consists of the following 5 separate units interlinked by cables: 1) Bathysphere containing a ЛН-17 (LI-17) camera tube, focussing and deflecting system, preamplifier assembled on four 6Х5Б (6ZH5B) tubes, and a power source for the camera tube. Size without illuminators: 745 mm long, 222 mm in diameter; weight in water - 0 + 1 kg. 2) Control and pulse forming unit containing video amplifier, compensating signal generator, video monitor with 13ЛК2Б (13LK2B) kinescope, and a control panel. Size: 179 x 328 x 418 mm; weight - 14 kg. 3) Power supply unit size: 179 x 328 x 418 mm; weight - 18 kg. 4) Switching unit serves for supplying electric power to the illuminators attached to the bathysphere; size is not given; weight - 8 kg. 5) Additional video monitor assembled on 35ЛК2Б (35LK2B) kinescope; size and weight are not given. The purpose of this additional video

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PTU-5 Underwater Television Unit

S/187/60/000/001/003/003  
A189/A026

monitor is to permit the simultaneous observation of the image by several observers. The camera tube uses interlaced scanning; 625 lines; 25 frames per sec.; 4 x 3 picture aspect ratio (width to height). Power supply - 220 volts, + 5%, 50 cps. The unit was successfully tested in underwater operation in 1958. There are 7 photographs.

Card 2/2

YARKOV, V. N., BOGOMOLOV, K. S., and DOBROSERDOVA, E. P.

"Investigation of the Electron Sensitivity of Photographic Emulsions."  
paper given at the International Conference on Scientific Photography,  
Cologne, 24-27, Sep 1956

E-3,068,138

YARKOV, V. N. and DOBROSERDOVA, Ye. P.

"Electromicroscopical Investigation of the Crystallization of Silver Halide During Photographic Emulsion Making," a paper presented at the International Conference on Scientific Photography, Cologne, 24-27 Sep 1956

E-3072367

YANKOV, V. H., DOBROSENOVA, Ye. P., and BOGOMOLOV, R. S.

"Investigation of the electron sensitivity of photographic emulsions,"  
a paper submitted at the International Conference of Scientific Photography,  
Cologne, FRG, 24-27 Sep 56.



YARKOV, Vyacheslav Vyacheslavovich; OSINTSEV, A.S., prof., doktor  
ekon. nauk, retsenzent; CHAPAYKINA, P.K., red. izd-va;  
MATLYUK, R.M., tekhn. red.

[Learn to manage]Uchis' khoziaistvovat'. Sverdlovsk, Metal-  
lurgizdat, 1961. 43 p. (MIRA 15:9)  
(Steel industry--Management)  
(Industrial management)

YARKOV, Vyacheslav Vyacheslavovich; BARKAS, V.M., red.izd-va;  
GINZBURG, R.Ya., tekhn. red.

[Learn to manage] Uchis' khoziaistvovat'. Izd.2., perer. i  
dop. Moskva, Metallurgizdat, 1963. 57 p. (MIRA 16:12)  
(Russia--Economic policy)  
(Steel industry--Management)

YARKOV, Vyacheslav Vyacheslavovich; KOVALEVSKIY, M.A., red.izd-va;  
EN'YAKOVA, G.M., tekhn. red.

[Establishment of work norms and wages] Normirovanie truda  
i zarabotnaia plata. Izd.2., perer. i dop. Moskva, Metal-  
lurgizdat, 1963. 64 p. (MIRA 17:1)

YARKOVA, A.S., aspirantka

Comparative effectiveness of fattening young swine of the  
Large White breed to various live weights. Izv. TSKHA  
no.3:112-117 '62. (MIRA 15:9)

1. Nauchnyy rukovoditel' professor A.P. Red'kin.  
(Swine--Feeding and feeds)

TRAPEZNIKOV, A.I.; CHUKIN, S.A.; BEDRIN, V.A.; KOZYREV, D.I.;  
BUTOVSKAYA, A.P.; YARKOVA, D.A.

Automation and mechanization of auxiliary operations in  
metalworking. Prom. energ. 17 no.11:10-11 N '62. (MIRA 15:12)  
(Metalworking machinery)

KATAYEV, Ye.G.; TANTASHEVA, F.R.; YARKOVA, E.G.

Reaction of triethyl phosphite with  $\beta$ -bromovinyl sulfones.  
Zhur. ob. khim. 35 no.4:759 Ap '65.

(MIRA 18:5)

1. Kazanskiy gosudarstvennyy universitet im. V.I. Ul'yanova-Lenina.

ARBUZOV, B.A.; BUTENKO, G.G.; YARKOVA, E.G.

Reaction of dibenzylphosphinic acid with formic acid esters.  
Izv. AN SSSR. Ser. khim. no.6:1085-1088 '65.

(MIRA 18:6)

1. Kazanskiy gosudarstvennyy universitet imeni Ul'yanova-Lenina.

YARKOV, Sergey Petrovich, prof. [deceased]; prinimali uchastiye:  
GRECHIN, I.P., kand. sel'khoz. nauk, dotsent; KAURICHEV, I.S.,  
kand. sel'khoz. nauk, dotsent; KULAKOV, Ye.V., st. nauchnyy  
sotrudnik; YARKOVA, M.A., pochvoved; TYURIN, I.V., akademik,  
otv. red.; PAVLOV, A.N., red. izd-va; YEGOROVA, N.F., tekhn.  
red.

[Soils of the forest-meadow zone of the U.S.S.R.] Pochvy lesa-  
lugovoi zony SSSR. Moskva, Izd-vo Akad. nauk SSSR, 1961. 317 p.  
(MIRA 14:5)

1. Kafedra pochvovedeniya Moskovskoy Ordona Lenina Sel'sko-  
khozysaystvennoy Akademii im. K.A.Timiryazeva (for Grechin, Kau-  
richiev) 2. Pochvenno-agronomicheskiy muzey im. V.R.Vil'yamsa  
(for Kulakov)

(Soils)



ZAKHARYAN, V.M., inzh.; YAKUBOVA, H.D., inzh.

Simplified methodology for the conversion of universal electric  
motors. Elektrotehnika 35 no.52:49-52 Ny'62 (MIRA 17:8)

YARKOVA, V.M.

Rare case of fog formation. Meteor. i gidrol. no.2:32-33 F '66.  
(MIRA 19:1)

1. Novosibirskiy aviameteorologicheskii tsentr. Submitted  
April 14, 1965.

YARKOVETH, A.I.

Effect of the tightening pressure on the strength of bolt joints.  
Izv. vys. ucheb. zav.; av. tekhn. 8 no.1:149-155 '65.

(MIRA 18:3)

YARKOVETS, A. I., Cand. Tech. Sci. (diss) "Investigation of Effect of Technological Factors on Quality of Bolted Connections Used in Designs of Airplanes," Moscow, 1931, 16 pp. (Moscow Aviation Inst.) 200 copies (KL Supp 12-61, 278).

**"APPROVED FOR RELEASE: 09/01/2001**

**CIA-RDP86-00513R001962120020-8**

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**APPROVED FOR RELEASE: 09/01/2001**

**CIA-RDP86-00513R001962120020-8"**

YARKOVETS, M. I.

YARKOVETS, M. I. -- "The Problem of Arrhythmia in Children." Cand Med Sci,  
Second Moscow Medical Inst imeni I. V. Stalin, 25 Jan 54. (Meditsinskiy Rabotnik,  
8 Jan 54)

SO: SUM 168, 22 July 1954

YARKOVICH, Svyatoslav [Iarkovich, Sviataslau], inzh.

Once again she followed Gaganova's example. Rab.i sial. 38  
no.1:9-10 Ja '62. (MIRA 15:4)

1. Zavod shveynykh mashin, g. Orsha.  
(Orsha--Sewing machines)



YARKOVICH, S.

~~\_\_\_\_\_~~  
In the village of Pashino. Rab. 1 sial. 39 no.2:5 -F '63.  
(MIRA 16:4)

1. Sekretar' partiynogo byuro, agronom-ekonomist kol'khosa  
"Kamintern", Orshanskogo rayona.

(Orsha District—Flax)

I 11003-66 EWT(m) IJP(c) SOURCE CODE: UR/0057/66/036/006/0988/0996  
 ACC NR: AP8018721

AUTHOR: Yarkovoy, O.I. (Deceased)

ORG: none

TITLE: A nonstationary self-consistent model of an azimuthally uniform ring of charged particles in an external electromagnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 988-996

TOPIC TAGS: charged particle, particle beam, electromagnetic field, motion equation, mathematic method, nonlinear differential equation, kinetic equation, particle storage ring

ABSTRACT: In this 9-page paper the author presents "as briefly as possible" the basic ideas of the nonstationary self-consistent model of an azimuthally uniform ring of charged particles in an arbitrary external field that he has developed in more detail elsewhere (Preprint, OIYaI, 2183, Dubna, 1965). The calculation technique was developed because of its utility for the design and analysis of storage rings. The model is based on what the author calls the "x-linear approximation", which consists in the assumption that the difference between the forces on an axial and an off-axis particle is directly proportional to the distance of the off-axis particle from the axis. A nontrivial positive definite integral of motion is constructed in the x-linear

UDC: 538.3

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I 4002-56

ACC NR: AP6018721

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approximation from solutions of the differential equations conjugate to the equations of motion, and with the aid of that integral the equations of motion are reduced to a set of nonlinear differential equations that, at least under some conditions, are tractable. In the present paper all proofs, as well as the motivations for some of the assumptions, are omitted, reference being made to the preprint cited above and to other papers of the author. The x-linear approximation imposes no limitations on the time dependence of the external field and does not involve linearization of the kinetic equation. The resulting theory is a kinetic theory, rather than a several-component hydrodynamic theory, in the sense that at each point there is a continuous distribution of momenta. The stress tensor vanishes only on the boundary of the particle beam, and the theory accordingly permits calculation of the motion of the boundary. The final equations can be simplified in certain special cases that are discussed very briefly; in the case of an adiabatic process the equations reduce to a set of algebraic equations. The calculation technique can be generalized to the case of an azimuthally nonuniform charged particle ring; it was the author's intention to present such a generalization in the near future. The author thanks V.I.Veksler, Ya.B.Faynberg, and E.A.Perel'shteyn for their interest in the work and for discussions. Orig. art. has: 33 formulas.

SUB CODE: 20.12/

SUBM DATE: 01Jun65/

ORIG.REF: 004/

OTH REF: 001/

Card 2/220

YARKOVOY, O.I.

[Steady state of an axially symmetrical system of charged particles] O statsionarnom sostoianii aksial'no-simmetrichnoi sistemy zariazhennykh chastits. Dubna, Ob"edinennyi in-t iadernnykh issledovaniy, 1962. 10 p. (MIRA 15:2)  
(Particles (Nuclear physics)) (Quantum theory)

YARKOVOY, O.I.

Steady state of an axially symmetric system of charged particles.  
Zhur. tekhn. fiz. 32 no.1:1285-1290 N '62. (MIRA 15:11)  
(Particles (Nuclear physics))

24.6710

S/057/62/032/011/001/014  
B104/B102

AUTHOR: Yarkovoy, O. I.

TITLE: The stationary state of an axisymmetric system of charged particles

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 11, 1962, 1285-1290

TEXT: A self-consistent collisionfree and axisymmetric system of charged particles is investigated. It is shown in the introduction that the general solution to the kinetic equation of this system is given by  $\{fH\} = 0$ , where  $f$  is a distribution function depending on the two integrals  $H$  and  $M_0$  of the equations of motion

$$f = \frac{c^2 \pi}{8 \pi^2 e^3} \delta(H - H_0) \delta(M_0 - M_0). \quad (8).$$

The self-consistent field is determined by:

$$\left. \begin{aligned} \Delta \varphi &= -4 \pi \rho, \\ \text{rot rot } A &= \frac{4 \pi}{c} j, \end{aligned} \right\} \quad (6)$$

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B104/B102

The stationary state of an ...

$$\left. \begin{aligned} \rho &= e \int f dV_p = \rho(r, \varphi, A, \dots), \\ j &= e \int \mathbf{v} f dV_p = j(r, \varphi, A, \dots). \end{aligned} \right\} \quad (7),$$

where  $dV_p$  is the volume element in the momentum space. In states with fixed energy and generalized momentum the charge density is given by

$$\begin{aligned} \rho &= \frac{c^2 \pi}{8\pi^2 e} \int \delta(H - H_0) \delta(M_0 - M_0) \frac{dM_0 dP_r dP_z}{r} = \frac{c^2 \pi}{4\pi e r} \int_0^\infty \delta(H - H_0) p_1 dp_1 = \\ &= \frac{\pi}{4\pi e r} \int_{\sqrt{m^2 c^4 + \frac{c^2}{r^2} \left(M_0 - \frac{e}{c} r A_0\right)^2}}^\infty \delta(H - H_0) [H - e\varphi] dH = \\ &= \frac{\pi}{4\pi e r} (H_0 - e\varphi) \sigma \left[ (H_0 - e\varphi)^2 - m^2 c^4 - \frac{c^2}{r^2} \left(M_0 - \frac{e}{c} r A_0\right)^2 \right], \end{aligned} \quad (10)$$

$$\sigma[x] = \begin{cases} 1 & \text{при } x > 0 \\ 0 & \text{при } x < 0. \end{cases}$$

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S/057/62/032/011/001/014  
B104/B102

The stationary state of an ...

and the current density by

$$\begin{aligned} j_z &= \frac{c^2 \kappa}{8\pi^2 e} \int \left( \frac{M_0}{r} - \frac{e}{c} A_0 \right) \frac{c^2}{H - e\varphi} \delta(H - H_0) \delta(M_0 - M_0) \frac{dM_0 dP_r dP_z}{r} = \\ &= \frac{c^2 \kappa}{4\pi e r} \int_{-\infty}^{\infty} \frac{\left( \frac{M_0}{r} - \frac{e}{c} A_0 \right) \delta(H - H_0) dH}{\sqrt{m^2 c^4 + r^2 \left( M_0 - \frac{e}{c} r A_0 \right)^2}} \quad (11), \\ &= \frac{\kappa c^2}{4\pi e r} \left( \frac{M_0}{r} - \frac{e}{c} A_0 \right) \sigma \left[ (H_0 - e\varphi)^2 - m^2 c^4 - \frac{e^2}{r^2} \left( M_0 - \frac{e}{c} r A_0 \right)^2 \right]. \end{aligned}$$

$\int A$

where  $\vec{j} = (0, j_\theta, 0)$ . For the region  $\bar{S}$ , which is free from external charges and currents, the system (6) has the form

$$\left. \begin{aligned} \frac{1}{r} \frac{\partial}{\partial r} \left( r \frac{\partial \varphi}{\partial r} \right) + \frac{\partial^2 \varphi}{\partial z^2} &= -\frac{\kappa}{e r} (H_0 - e\varphi) \sigma, \\ \frac{1}{r} \frac{\partial}{\partial r} \left( r \frac{\partial A_0}{\partial r} \right) - \frac{A_0}{r^2} + \frac{\partial^2 A_0}{\partial z^2} &= -\frac{\kappa c}{e r} \left( \frac{M_0}{r} - \frac{e}{c} A_0 \right) \sigma. \end{aligned} \right\} \quad (12).$$

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B104/B102

The stationary state of an ...

As regards the region S of the self-consistent field in the (r,z) plane, which can include particles of the system, the field  $\varphi$  and the individual components  $A_\theta$  of  $\vec{A}$  are expressible as

$\varphi = \varphi_c + \varphi_e$ ;  $A_\theta = A_{\theta c} + A_{\theta e}$  and the equations (6) take the form

$$\left. \begin{aligned} \frac{1}{r} \frac{\partial}{\partial r} \left( r \frac{\partial E}{\partial r} \right) - \frac{z}{r} E + \frac{\partial^2 E}{\partial z^2} &= 0, \\ \frac{1}{r} \frac{\partial}{\partial r} \left( r \frac{\partial p_\theta}{\partial r} \right) - \left( \frac{z}{r} + \frac{1}{r^2} \right) p_\theta + \frac{\partial^2 p_\theta}{\partial z^2} &= 0. \end{aligned} \right\} \quad (18).$$

Here  $\varphi_c$  and  $A_{\theta c}$  belong to the internal field of the system and  $\varphi_e$  and  $A_{\theta e}$  to the external field. Also,

$$\left. \begin{aligned} \varphi_e &= \int G_\varphi(r, r', z, z') \rho(r', z') r' dr' dz', \\ A_{\theta e} &= \frac{1}{c} \int G_A(r, r', z, z') j_\theta(r', z') r' dr' dz', \end{aligned} \right\} \quad (14)$$

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S/057/62/032/011/001/014  
B104/B102

The stationary state of an ...

$$\left. \begin{aligned} G_r &= \int_0^{2\pi} \frac{d\theta}{\sqrt{r^2 + r'^2 - 2rr' \cos \theta + (z - z')^2}} \\ G_A &= \int_0^{2\pi} \frac{\cos \theta d\theta}{\sqrt{r^2 + r'^2 - 2rr' \cos \theta + (z - z')^2}} \end{aligned} \right\} \quad (15)$$

$$\left. \begin{aligned} H_0 - e\varphi &= E, \\ \frac{M_0}{r} - \frac{e}{c} A_0 &= p_0, \end{aligned} \right\} \quad (16).$$

JA

On account of its nonlinearity for given  $\varphi_e$  and  $A_{0e}$  the system (18) is very difficult to solve, whereas the field equation (12) offers the possibility of a general solution. For the region S, (12) can be written in the form

$$\left. \begin{aligned} E &= -\frac{1}{4\pi} \int G_r E d\mathbf{r}' dz' + H_0 - e\varphi, \\ p_0 &= -\frac{1}{4\pi} \int G_A p_0 d\mathbf{r}' dz' + \frac{M_0}{r} - \frac{e}{c} A_0. \end{aligned} \right\} \quad (19).$$

Card 5/6

The stationary state of an ...

S/057/62/032/011/001/014  
B104/B102

An arbitrary particular solution of (12) is discussed. The boundaries of the region can be determined, and physical considerations require that  $\psi_e$  and  $A_{\theta e}$  should satisfy the homogeneous Maxwell equation in a certain domain  $\bar{S}$  ( $S \subset \bar{S}$ ,  $S$  and  $\bar{S}$  have no common points). This requirement, however, is equivalent to demanding that  $\varphi$  and  $A_\theta$  should satisfy the homogeneous Maxwell equation in the region  $\bar{S} - S$ , which gives rise to an unusual situation in that a Cauchy problem exists for equations of the elliptic type. Even though no proof is known that a unique solution to this problem exists, the author shows that analytic solutions to the system (19) for the region surrounding the boundary of  $S$  are sufficient. In the absence of the corresponding mathematical theorem, however, these solutions cannot be analytically continued beyond the boundary of  $S$ . VA

SUBMITTED: March 5, 1962

Card 6/6

YARKOVOY, V.S.; IVANOV, V.D.

Structure of the transition zone during the welding of  
dissimilar steels. Metalloved. i term. obr. met. no. 6:  
48-50 Je '64. (MIRA 17:7)

YARKOVSKIY, KUPCHO

Czechoslovakia/Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour : Referat. Zhurnal Khimiya No 6, 1957, 18889

Author : Yarkovskiy, Kupcho.

Inst : -

Title : On the Problem Concerning the Geochemistry of Micro-elements, in particular of Vanadium.

Orig Pub : Geol. Prace SAV. Zpravy, 1956, No 7, 101-108.

Abstract : The results of the spectroscopical study of rocks, ores and minerals from various regions of Slovakia are briefly reported. According to 15 analyses, Si, Al, Mg, Ca, Fe, Na, K, Ti are present in the amount of 1 to 10%; Ba, Sr, Mn, Cr, V, Cu, Ni, Zn, Zr, B, Ge are present in the amount 0.01 to 1%, Pb, Sc, Co, Li, Sn, Ag, Mo, Sb, Ga, J are present in the amount of 0.0001 to 0.01%. The laterite hypothesis of origin is accepted with regard to the Molitn bauxites due to the presence of rare indicator elements in them. The high concentration of V (~0.1% of  $V_2O_5$ ) in graphitic schists and asphalts corresponding to the general content of organic matter is recorded. Increased content of Ge in paleogenic coal is recorded.

Card 1/1

-5-

YARLOV, M.

Forests and Forestry

With the transformers of nature, Klub No. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

KUDRYAVTSEV, N.T.; TYUTINA, K.M.; YARLYKOV, M.M.

Electrodeposition of the alloy tin-antimony. Trudy MKHTI no.26:120-  
127 '59. (MIRA 13:9)

(Tin-antimony)

KRUGLIKOV, S.S.; VOROB'YEVA, G.F.; KUDRYAVTSEV, N.T.; YARLYKOV, M.M.;  
ANTONOV, A.Ya.

Mechanism of surface leveling in the electrodeposition of metals.  
Dokl. AN SSSR 149 no.4:911-914 Ap '63. (MIRA 16:3)

1. Moskovskiy khimiko-tekhnologicheskii institut im. D.I.Mendeleyeva.  
Predstavleno akademikom A.N.Frumkinym.  
(Electroplating)



KUDRYAVTSEV, N.T.; YARLYKOV, M.M.; MEL'NIKOVA, M.M.

Value of the PH cathode in the layer in electrolytes during  
electrodeposition of nickel and iron. Zhur. prikl. khim. 38  
no.3:545-555 Mr '65. (MIRA 18:11)

1. Submitted March 9, 1963.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001962120020-8

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001962120020-8"

18 formulas.

YARLYKOV, S.A..

Early and later results of surgery for chronic tonsillitis in  
rheumatic fever patients. Vrach.delo no.6:645-647 Je '58 (MIRA 11:7)

1. Klinika bolezney ukha, gorla i nosa (zav. - prof. T.Ya. Abramov)  
i klinika gospi'tal'noy terapii (zav. - prof. V.S. Nesterov) Voronezhsko-  
go meditsinskogo instituta.  
(TONSILS--SURGERY)  
(RHEUMATIC FEVER)

YARLYKOV, S.A.

Postoperative period in tonsillectomy in rheumatic fever patients.  
(MIRA 13:5)  
Sov.med. 24 no.1:53-56 Ja '60.

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - prof. T.Ya.  
Abramov) i kafedry gosital'noy terapii (zav. - prof. V.S.  
Kosterov) Voronezhskogo meditsinskogo instituta.  
(TONSILLECTOMY)  
(RHEUMATIC HEART DISEASE surgery)

YARLYKOV, S. A., Cand Med Sci -- "<sup>Effectiveness</sup> ~~Efficiency~~ of tonsillectomy in patients  
~~affected with~~ rheumatism and chronic tonsillitis." Voronezh, 1960 (Ivanovo  
State Med Inst). (KL, 1-61, 212)

-455-

YARLYKOV, S.A.

Late results of tonsillectomy in patients with chronic tonsillitis  
and rheumatic fever. Zhur. ush., nos. 1 gorl. bol. 20 no.5:63-67  
S-O '60. (MIRA 14:6)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - prof. T.Ya.  
Abramov) i kafedry gosptal'noy terapii (zav. - prof. V.S.Nesterov)  
Voronezhskogo meditsinskogo instituta.  
(TONSILS—DISEASES) (RHEUMATIC HEART DISEASE)

YARLYKOV, S.A.

Clinical aspects of foreign bodies in the respiratory  
tracts of children. Sov. med. 27 no.12:76-78 O '64.  
(MIRA 18:11)

1. Klinika bolezney ukha, gorla i nosa (ispolnyayushchiy  
obyazannosti zaveduyushchego - kand. med. nauk S.A. Yarlykov)  
Voronezhskogo meditsinskogo instituta.



(A) L 11806-66 ENT(d)/ENT(1)/FCC/EWP(v)/EWP(k)/EWP(h)/EWP(1) CH  
ACC NR: AP6002183 SOURCE CODE: UR/0146/65/008/006/0127/0131

AUTHOR: Gridin, A. S.; Yarlykova, T. A.

ORG: Dept. of Special Optical Instruments, Leningrad Institute of Precision Mechanics and Optics (Kafedra spetsial'nykh opticheskikh priborov, Leningradskiy institut tochnoy mekhaniki i optiki)

TITLE: Attenuation of optical radiation passing through a dust-laden atmosphere

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 6, 1965, 127-131

TOPIC TAGS: light transmission, dust laden atmosphere

ABSTRACT: It was found experimentally that coal dust largely consists of particles whose sizes considerably exceed the wavelengths of light. Hence, only the absorption and diffused reflection are taken into account in the present analysis of light transmission through a dust-laden atmosphere (formulas developed). The transmission factor of such an atmosphere was measured on a laboratory outfit where the coal dust was kept in suspension in a large pipe by blower-circulated air, and a beam of light from an incandescent lamp passing through the pipe was measured. The theoretical plot of transmission factor vs. coal-dust concentration comes very close to the experimental. The results can be used in designing control systems which use a light beam in dust-laden atmospheres (e.g., coal mines). Orig. art. has 4 figures and 6 formulas. 14

SUB CODE: 17 SUBM DATE: 04Jul64 / ORIG REF: 002/ ATD PRESS: 4180  
Card 1/1 UDC: 535.345.3

YARLYKOVA, Ye.I.; YEVSTIGNEYEVA, R.P.; LUZGINA, V.N.

Methodology of determining free protoporphyrins in  
erythrocytes. Lab. delo no. 11:649-650 '64. (MIRA 17-12)

1. Kafedra klinicheskoy laboratornoy diagnostiki (zaveduyushchiy-  
prof. Ye.A.Kost) Tsentral'nogo instituta usovershenstvovaniya  
vrachey i kafedra khimii tonkikh organicheskikh soyedineniy  
(zaveduyushchiy - prof. N.A.Preobrazhenskiy) Moskovskogo  
Instituta tonkoy khimicheskoy tekhnologii im. M.V.Lomonosova.

YARLYKOVA, Ye.I.

Hemoglobin synthesis in anemia. Trudy TSIU 77:85-89 '65.  
(MIRA 18:9)

1. Kafedra laboratornoy klinicheskoy diagnostiki (nav. prof.  
Ye. A. Kost) Tsentral'nogo instituta usovershenstvovaniya  
vrachev.

YARM-GAYEVA, N. T., GALKINS, K. S., KOZLOVSKIY, V. S., LOYEVSKIY, M. L.,  
ROVENSKAYA, N. M., SHUL'GA, M. I., SHCHERBAKOVA, O. I.

"Pneumoconiosis in workers engaged underground work  
in coal mines, and means of its prophylaxis."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists  
and Infectionists, 1959.

YARMAK, D.F., assistant

Arterial blood supply to the renal lobules in a comparative  
morphologic study; preliminary report. Sbor.nauch.trud.Vin.der.  
med.inst. 18 no.2:76-80 '58. (MIRA 16:2)

1. Kafedra normal'noy anatomii (zav. kafedroy doktor med.nauk,  
prof. V.G. Ukrainskiy) Vinnitskogo gosudarstvennogo meditsinskogo  
instituta.

(KIDNEYS—BLOOD SUPPLY)

YARMAK, D.F., assistant

Anatomy of the kidney in the whale. Sbor.nauch.trud,Vih.der.  
med.inst. 18:72-75 '58. (MIRA 16:2)

1. Kafedra normal'noy anatomii (zav. kafedroy doktor med.nauk,  
prof. V.G. Ukrainskiy) Vinnitskogo gosudarstvennogo meditsinskogo  
instituta.

(WHALES)

(KIDNEYS)

YARMAK, G. A.

YARMAK, G. A.

First finds of paleolithic tools in southern Kazakhstan. Vest. AN  
Kazakh. SSR 13 no. 7:104-108 J1 '57. (MIRA 10:9)  
(Kara-Tau--Stone implements)

YARMAK, G.A., inzhener-geolog

First discovery of cave nitrogen-phosphate fertilizers in  
Kazakhstan. Sbor.nauch.trud.KazGMI no.18:102-104 '59 (MIRA 15:2)  
(Kazakhstan--Guano)  
(Kazakhstan--Fertilizers and manures)



YARMAK, G.A.

Dolomite deposits in the Lesser Kara-Tau. Izv. AN Kazakh. SSR.  
Ser. geol. no.2:98-101 '60. (MIRA 13:8)  
(Kara-Tau--Dolomite)

ANDRYUSHCHENKO, A.I., doktor tekhn. nauk; LAPSHOV, V.N., kand. tekhn. nauk;  
KURNOSOV, A.T., inzh.; YARMAK, L.N., inzh.

Effectiveness of regenerative feed-water heating in waste-heat  
boilers. Teploenergetika 10 no.8:29-33 Ag '63. (MIRA 16:8)

1. Saratovskiy politekhnicheskii institut.  
(Boilers)

YAFMAK, L.P., inzh.

Effective system for utilizing the heat of continuous boiler  
scavenging. Sbor. nauch. soob. SPI no.17:105-110 '62.

(MIRA 17:6)

SHUVALOV, M.A., inzh.; ZAKHAROVA, L.B., inzh.; YARMAK, L.N., inzh.

Regulation of the temperature of superheated steam by varying  
the intensity of the flame in a boiler operating on natural  
gas. Sbor. nauch. soob. SPI no.17:98-104 '62.  
(MIRA 17:6)

YANMAK, L.N., inzh.

Calculation of optimum distribution of gas velocities in the gas  
lines of waste-heat boilers. Izv. vys. ucheb. zav.; energ. 7 no.  
9:36-42 S '64. (MIRA 17:11)

1. Saratovskiy politekhnicheskoy institut. Predstavlena kafedroy  
teploenergetiki.

IVANOV, K.I.; GOYEV, V.N.; USHKOV, N.N.; YARMAK, M.F.

Study of rock breaking in percussion drilling. Vzryv. delo no.46/3:  
21-28 '61. (MIRA 15:1)  
(Boring)

BELOV, A.I.; IVANOV, K.I.; KLOCHKO, N.A.; SIDOROV, S.P.; USHKOV, N.N.;  
YARMAK, M.F.

Ways of improving bits for BA-100 air percussion drilling rigs.  
Vzryv. delo no.46/3:232-238 '61. (MIRA 15:1)  
(Boring machinery)

IVANOV, Konstantin Ivanovich; USHKOV, Nikolay Nikolayevich; YARMAK  
Mikhail Fedorovich, GOYEV, Vadim Nikitich; TARASOV, L.IA.,  
Otv. red.; PARISEVSKIY, V.N., red.izd-va; SABITOV, A.,  
tekhn. red.

[Boring holes in underground mining of ores] Burenie shpurov  
i skvazhin pri podzemnoi dobyche rud. Moskva, Gosgortekh-  
izdat, 1963. 130 p. (MIRA 16:9)

(Boring)



LYUBIMOV, K.A., kand.tekhn.nauk; YARMAK, M.I., inzh.

Economical communications and wire broadcasting cables. Vest.  
elektroprom. 33 no.9:10-13 S '62. (MIRA 15:10)  
(Electric cables) (Electric lines--Underground)

LYUBIMOV, K.A.; MAKHOV, Yu.V.; NAZAR'YEV, O.V.; YARMAK, M.I.;  
SHVARTSMAN, V.O., otv. red.; VOLODARSKAYA, V.I., red.;  
CHURAKOVA, V.A., tekhn. red.

[Telephone and wire broadcasting cables with polychlorovinyl  
and polyethylene insulation] Kabeli dlia sel'skoi telefonnoi  
sviazi i radiofikatsii s poliklorvinilovoi i polietilenovoi  
izoliatsiei. Moskva, Sviaz'izdat, 1962. 42 (MIRA 16:8)

(Electric cables) (Polyethylene)

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**APPROVED FOR RELEASE: 09/01/2001**

**CIA-RDP86-00513R001962120020-8"**

AUTHORS: Perlovskiy, R. Sh., Yarmak, M. K., SCV/119-58-9 2/18  
Engineers

TITLE: Magnetic Gas Analyzers (kislorod magnitnyye analizatory)

PERIODICAL: Priborostroyeniye, 1958, Nr. 9, pp. 3-7 (USSR)

ABSTRACT: Two new types of magnetic gas analyzers were developed by the experimental design office for automation (OKB); these types are the MGK-3 analyzer for the analysis of oxygen in a gas mixture containing many components, and the MGK-4 type for checking oxygen purity.

The MGK-3 apparatus works on the principle according to which a standard gas (i.e., a gas having constant oxygen content) flowing through a magnetic field has a different flow resistance as compared with the gas to be analyzed. This resistance implies a pressure drop which is used for determining the oxygen content of the gas to be analyzed. The pressure drop is measured by a differential pressure anemometer connected to an unbalanced bridge circuit. The gas chamber has a very narrow gap (0.1 mm) between the electrodes.

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# Magnetic Gas Analyzers

DOY/119-58-2-2/13

tween the pole pieces of a magnet so that a magnetic field intensity of about 40 000 to 50 000 Gauss is reached inside the slot. In order to have the temperature exactly adjustable a thermostat is used which is equipped with a contact thermometer and an electronic relay. The gas analyzer described will be mass-produced with measuring ranges of 0 - 5, 0 - 10, 0 - 21, 0 - 50 and 15 - 45 % O<sub>2</sub>. The

error of measurement of the apparatus is supposed to be smaller than 5 % of the maximum reading for each range.

2. The MGK-1 apparatus is a thermomagnetic gas analyzer that takes use of the paramagnetic properties of oxygen in dependence on its temperature. A warm body, if placed in an inhomogeneous magnetic field, may cause artificial convection. The apparatus consists of the absolute pressure governor of the RAD-2 P type, the controlling rotation meter of the RR-4 type, the annular chamber of the gas analyzer, the pole pieces, and a needle valve. A thin-walled glass tube is introduced into the annular chamber having 2 platinum windings which may each be connected to a Wheatstone's (Weaston) bridge (as bridge arms).

Card 2/3

**Magnetic Gas Analyzers**

SCV/119-58-9-2/3

The working of the magnetic gas analyzers does not depend on the oxygen percentage of the gas mixture but on the partial pressure of oxygen. The MGK -4 apparatus is to be manufactured for the following measuring ranges: 95 - 100, 90 - 100, 80 - 100, 50 - 100 and 20 - 80 %  $O_2$ .

There are 4 figures.

Card 3/3

YARMAN, M.K.

AUTHORS: Blazhennova, A.H., Engineer, Ikhlov, I.A., 67-58-2-6/26  
Engineer, Perlovskiy, R.Sh., Engineer, Yarmak,  
M.K., Engineer

TITLE: The Automatic Oxygen Gas Analyzers DPG and MGK (Avtomaticheskkiye  
Kislородnyye gazoanalizatory DPG and MGK )

PERIODICAL: Kislород, 1958, // Nr 2, pp. 26-33 (USSR)

ABSTRACT: This paper deals with the chemical, chemical-physical and physical  
methods of gas analysis which serve as a basis for the construction  
of apparatus. Preference is given to the chemical-physical method  
of depolarization and in the case of automatized plants, to the  
physical method, in which the paramagnetic properties of oxygen, by  
which it is distinguished from all other gases, is utilized. In the  
section: Magnetic methods of Oxygen analysis the ratio between the  
intensity of magnetization, volume or specific magnetic suscepti-  
bility and magnetic permeability is determined and duly expressed  
in the formulae. Furthermore, the theories are developed which serve  
as a basis for the elaboration of methods of gas analysis and on the  
strength of which suitable apparatus are built. The following methods  
are distinguished: 1.) Physical-, 2.) magnetomechanical-, 3.) ther-  
momagnetic-, and 4.) magnetoelectrical methods. Preference is given

Card 1/2

The Automatic Oxygen Gas Analyzers ~~MGK~~ and DPG

67-58 -2-6/26

to the magnetomechanical (Ref 4-9) and to the thermomagnetic (Ref 10-17) methods. Among the latest types of Soviet gas analyzers the magnetic MGK-3 and the thermomagnetic MGK-2 and MGK-4 are mentioned. Only the two latter are, however, described as being in accordance with the field dealt with by this paper. In the section The Depolarization Method of Oxygen Analysis the latest Soviet automatic oxygen depolarization analyzer of the type DPG5 -52 is described. It was constructed on the basis of the principle of the depolarization of the electrodes polarized by the oxygen (in the course of cathode regeneration). It was designed by OKBA MKhD. The apparatus described is already being used in several industrial plants in the USSR. There are 5 figures, and 22 references, 9 of which are Soviet.

AVAILABLE: Library of Congress

1. Oxygen--Analysis--Magnetics
2. Oxygen--Analysis--Polarization

Card 2/2



AUTHOR: Yarmak, M. K., Engineer SOV/67-11-5-10/18

TITLE: Automatic Oxygen-Gas Analyzers (Avtomaticheskiye  
kislородnyye gazoanalizatory)

PERIODICAL: Kislород, 1958, Vol 11, Nr 5, pp 55 - 56 (USSR)

ABSTRACT: This is a report dealing with some foreign apparatuses which have brought considerable advancement in the field of oxygen analysis. The apparatuses under review are the thermomagnetic plant "Oximat" of the firm Siemens und Halske (Figure, general scheme and cross-section of the magnetic experiment chambers), the thermomagnetic plant of the firm Hartmann und Braun "Magnos 5" (Figure) (electrical and gasanalytical scheme), and a gas-analyzer of the firm Semak (Figure of the scheme). Two further models of mechanomagnetic gas analyzers of the firm Bekman are mentioned. All the apparatuses mentioned above are equipped with several different scale ranges of the %O<sub>2</sub>. There are 4 figures.

Card 1/2

YARMAK, M. Ye.

"Present-Day Automatic Magnetic Methods for the Analysis of Oxygen,"  
Experimental Design Bureau, Ministry of Chemical Industry, Khimicheskaya Promyshlennost',  
No. 2, Mar. 57, pp 95-102.

Abstract in SUM: 1391

YARMAK, N.  
KUVSHINOV, I., KUZNETSOV, G., YARMAK, N.

Farm Management

A textbook on ("Planned utilization of land." Reviewed by I. Kuvshinov, G. Kuznetsov,  
N. Yarmak.) Sots. sel'. khoz. no. 3, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS, LIBRARY OF CONGRESS, AUGUST 1952. UNCLASSIFIED.

YARMAK, Nikolay Iosifovich; SHEV'YEVA, M.Ye., red.; SUKHODOL'SKAYA, I.M.,  
tekhn.red.; GOR'KOVA, Z.D., tekhn.red.

[Agriculture in the Korean People's Democratic Republic]  
O sel'skom khoziaistve Koreiskoi Narodno-Demokraticheskoi  
Respubliki. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 78 p.  
(MIRA 13:1)

(Korea, North--Agriculture)

AUTHORS: Zakharikov, N. A., Blokh, S. A., Sen', Z. P., SOV/72-58-9-9/20  
Lesovoy, N. V., Yarmak, O. F.

TITLE: Non-Recurrent Baking of Porcelain. (Skorostnoy odnokratnyy  
obzhig farforya)

PERIODICAL: Steklo i keramika, 1958, <sup>16</sup>ANr 9, pp 20 - 24 (USSR)

ABSTRACT: This is an investigation of the influence of the rate of heating of the products upon their quality, if they are baked by a non-recurrent process without casing. The tests were carried out with porcelain cups, sizes B-53 and "Kiyevskaya". The ingredients of the batch are given in table 1 and the results for the chemical analysis (in percent) are given in table 2. The molecular formula for the batch is also presented. For increasing the mechanical strength of the semi-finished porcelain product 0,3% of carboxy-methyl cellulose were added to the batch. 0,2% of fluid glass and 0,1% of soda were used in the preparation of the electrolyte. The porcelain cups were cast in plaster molds so fashioned to give a wall strength of 1,5-2,5 mm. Moisture is driven off to

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Non-Recurrent Baking of Porcelain

SO7/72-58-9-9/20

a content of 1% under natural conditions. The ware is then glazed with a O-45VZPA hand operated atomizer. The raw materials for the glaze are listed in table 1, their chemical analysis is detailed in table 2. The molecular formula of the glaze is also given. The glazed cups were dried to a humidity of 0,5% and then baked in the laboratory furnace (Fig 1). The maximum temperature in the furnace was 1320°. The cups were placed on the bottom of the furnace without a casing and were cooled according to a schedule specified by the diagram in figure 2. The heating and baking period at this temperature varied between 2-5 hours. Data concerning the baking conditions are presented in table 3. The degree of whiteness of the body was determined by means of a FM photometer, whereas the water absorption and the heat resistance of the test products was checked according to GOST 7591-55. The best whiteness was obtained with combustion gases with a CO content of 3-4% (Fig 3). The rate of heating varied between 60 and 300° per hour. At this rate the quality of the products obtained is by no means inferior

Card 2/4

Non-Recurrent Baking of Porcelain

SOV/72-58-9-9/20

to that of the products from the Baranovka and Kiyev Works. Their water absorption does not exceed 0,39% . The specimens corresponded to the requirements imposed upon them in the checking of thermal and chemical resistivity. The glaze also exhibited a customary quality. Investigations of the microstructure of the body were carried out with a MP-3 microscope and X-ray structural analyses were made on the URS-70 instrument. In table 4 the structures of customary and of test products are portrayed. As can be seen they do not differ at all. Figures 4 to 8 contain micrographs of polished porcelain sections made after different baking periods. They do not indicate any essential variations in structure. The duration of baking is therefore not determined by the physical and chemical transformations in the porcelain but only by the heating facilities of the furnaces. The cooling process has hitherto not been the object of minute research. Preliminary experiments showed that a cooling of porcelain cups from 1320° to 100° is possible within 8 - 10 minutes without impairing the quality of the product. The experiments showed that a non-recurrent burning without casing

Card 3/4

Non-Recurrent Baking of Porcelain

SOV/72-58-9-9/20

of porcelaine products in short automatic continuous  
car tunnel furnaces is possible. There are 8 figures and  
4 tables.

ASSOCIATION: Institut ispol'zovaniya gaza AN Ukrainskoy SSR (Institute of  
Gas Utilization AS Ukr SSR)  
Nauchno-issledovatel'skaya laboratoriya Kiyevskogo  
sovnarkhoza (Scientific Research Institute of the Kiyev  
Council of National Economy)

Card 4/4



SEN', Z.P., kand.tekhn.nauk; TEREKHOVSKIY, B.I. [Terekhovs'kiy, B.I.],  
inzh.; YARMAK, O.F., inzh.

Some data on the effect of water vapor on the porcelain body in  
firing. Leh.prom. no.1:79-83 Ja-Mr '62. (MIRA 15:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut steklyannoy  
i farforo-fayansovoy promyshlennosti.  
(Ukraine--Pottery)

SEN', Z.P.; SIVCHIKOVA, M.G.; LUCHKA, M.Kh.; BELYAKOVA, I.N.;  
YARMAK, O.F.; DAYN, F.L.

Possibility of lowering the temperature of porcelain firing  
and of its replacement in drying under high temperatures.  
Stek.i ker. 19 no.9:21-24 S '62. (MIRA 15:9)  
(Porcelain)

YARMAK, O.F.

Studying the microstructure of glazes for tableware china dependent on the composition and temperature conditions of glazing. Leh.prom. no.1:77-83 Ja-Mr '63. (MIRA 16:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut stekol'noy i farforo-fayansovoy promyshlennosti.

YARMAK, O.F.; TRESVYATSKIY, S.G. [Tresviats'kiy, S.H.], doktor tekhn. nauk

Study of the millitization process in the porcelain mass.

Leh. prom. no. 2:69-71 Ap-Je'64

(MIRA 17:7)